APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/255,352	02/23/1999	SUMIYO TANAKA	15162/00200	8382

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SIDLEY AUSTIN BROWN & WOOD LLP
717 NORTH HARWOOD
SUITE 3400
DALLAS, TX 75201

EXAMINER
ALI, MOHAMMAD

ART UNIT	PAPER NUMBER
2177	

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Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 07-01)

	Application No.		Applicant(s)	
Office Action Summary	09/255,352		TANAKA, SUMIYO	
	Examiner		**Art Unit**	
	Mohammad Ali		2177	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on *16 August 2002* .

2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) *1-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) *1-32* is/are rejected.

7) ☒ Claim(s) *33* is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a) ☐ All b) ☐ Some * c) ☐ None of:

      1. ☐ Certified copies of the priority documents have been received.

      2. ☐ Certified copies of the priority documents have been received in Application No. _____ .

      3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: .

DETAILED ACTION

1.   This office action is in response to the Pre Amendments With CPA filed on August 16, 2002,

Paper No. 14.

Claims 1-33 are pending in this Office Action. Claims 1, 4, 7, 11, 14, 17, 21, 24, 27, 31, and 32

have been amended.

Applicant should submit an argument under the heading "Remarks" pointing out disagreements

with the examiner's contentions. Applicant must also discuss the references applied against the claims,

explaining how the claims avoid the references or distinguish from them.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for

the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the
United States before the invention thereof by the applicant for patent, or on an international application
by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this
title before the invention thereof by the applicant for patent.

3.   Claims 1-32 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,246,804 B1

issued to Sato et al. ("Sato").

With respect to claim 1, Sato teaches, an image database storing a plurality of database images

(col. 27 lines 20-55) of database,... (Abstract, col. 1 lines 7-67);

a specifying controller (col. 5 lines 32-67)for specifying a plurality of key images used to

specify,..(Abstract, col. 1 lines 7-67);

an extracting controller (col. 2 lines 13-22) for extracting common feature values of common

key,... (Abstract, col. 1 lines 7 to col. 2 lines 53);

a calculating (col. 1 lines 27-43) controller for comparing the common feature values, extracted by

the extracting controller, with the feature values of the plural database image,...(col. 1 lines 15-37)

calculate similarities between the common feature,...(col. 27 lines 32-67) feature values (col. 1 lines 15-

col. 2 lines 53, col. 18 lines 55 to col. 19 lines 7); and

a searching controller (col. 5 lines 32-67) for retrieving (col. 1 lines 7-67) from the database images one of the images which is similar to the key image,.... (col. 21 lines 28 to col. 22 lines 13, Fig. 31-32).

With respect to claim 7, Sato teaches, an image database storing a plurality of database images (col. 27 lines 20-55) to be searched for (Abstract, col. 1 lines 7-67);

a specifying controller (col. 5 lines 32-67) for specifying a plurality of key images used to specify search conditions (col. 1 lines 7-67, Abstract);

a first calculating controller (col. 5 lines 32-67) for comparing all of the key images, specified by the specifying controller, with respective feature values of the database images to thereby calculate similarities there between (col. 1 lines 7 to col. 2 lines 53, Abstract);

a second calculating controller (col. 5 lines 32-67) for selecting a particular key image from the plural key images specified by the specifying controller and for comparing the particular key image with the database images to thereby calculate similarities there between (col. 1 lines 7 col. 2 lines 53, Abstract);

a third calculating controller for calculating a final similarity for use in searching based on the similarities calculated respectively by the first and second calculating controllers (col. 5 lines 32-67, col. 1 lines 7 to col. 2 lines 53); and

a searching controller for retrieving one of the database images (col. 27 lines 20-67), which is similar to the particular key image, based on the final similarity calculated by the third calculating controller (col. 1 lines 7 to col. 2 lines 53, col. 5 lines 32-67).

With respect to claim 27, Sato teaches, storing a plurality of database images (col. 27 lines 20-55) to be searched for in an image database (col. 1 lines 7-67, Abstract);

specifying a plurality of key images used to specify search conditions by means of a specifying controller (col. 5 lines 32-67);

comparing all of the key images, specified by the specifying controller, with respective feature values of the database images to thereby calculate similarities there between, by means of a first calculating controller (col. 5 lines 32-67, col. 1 lines 7-67);

selecting by means of a second calculating controller, a particular key image from the plural key images specified by the specifying controller and for comparing the particular key image with the database images to thereby calculate similarities there between (col. 18 lines 55 to col. 19 lines 7, col. 1 lines 7-67);

calculating, by means of a third calculating image searching program, said program controller, a final similarity for use in searching based on the similarities calculated respectively by the first and second calculating controllers (col. 1 lines 7 col. 2 lines 43, col. 5 lines 32-67); and

retrieving by means of a searching controller, one of the database images, which is similar to the particular key image, based on the final similarity calculated by the third calculating controller (col. 1 lines 7-67, col. 5 lines 32-67, col. 27 lines 20-55, Abstract).

Claims 4, 11, 14, 17, 21, 24 and 31 have same subject matter as of the above claims and essentially rejected for the same reasons.

Claim 32 has same subject matter as of claims above except "plurality of key images which most resembles a desired image" and Sato teaches at col. 2 lines 31-39 and essentially rejected for the same reasons.

As to claim 2, an extracting means for extracting a plurality (col. 2 lines 13-17) of types of the feature quantities from the respective key images specified by the specifying controller (Abstract, col. 1 lines 7 col. 2 lines 53);

a selecting means for comparing the feature quantities, extracted by the extracting means, among the plural key images specified by the specifying controller to thereby select at least one of the types of the feature quantities (Abstract, col. 27 lines 20-40); and

a determining means for determining the common feature quantities based on the at least one type of the features quantities selected by the selecting means (Abstract, col. 1 lines 7 to col. 2 lines 53).

As to claim 3, the means is operable to compare the feature of the same types among the plural key images by the specifying controller and wherein the determining means is operable to calculate an average value of the feature quantities of the plural key image with respect to the types of the feature quantities selected by the selecting means, to thereby determine the calculated average value as

representing the common feature quantities (col. 27 lines 20-55, col. 5 lines 32-67, col. 27 lines 20-53, Abstract).

As to claim 5, the selecting controller is operable (col. 5 lines 32-67) to select as a particular one of the plural specified key images, the key images which most resemble to the database images being searched for (col. 1 lines 7- col. 2 lines 53).

As to claim 6, the calculating controller is operable to calculate a plurality of types of the feature quantities from the plural key images and then to calculate a degree of similarity (col. 18 lines 55 to col. 19 lines 7) by comparing the feature quantities with the database images (col. 27 lines 20-55) for each type, and wherein the selecting controller selects, as the particular key image from the plural specified images, the key images which most resemble to the database images being searched with respect to an average value of degrees of similarities calculated by the calculating means for each type of the feature quantities (col. 1 lines 7 to col. 2 lines 53, col. 5 lines 32-67).

As to claim 8, the third calculating controller is operable (col. 5 lines 32-67) to increase a weight of the degree of similarity, calculated by the first calculating controller, to a value greater than that of the degree of similarity, calculated by the second calculating controller, to thereby calculate the final degree of similarity (col. 18 lines 55 to col. 19 lines 7, col. 1 lines 7 to col. 2 lines 43)).

As to claim 9, the first calculating controller (col. 5 lines 32-67) is operable to extract the common feature quantities of the image common to all of the key images, and to compare those common feature quantities with the database image to thereby calculate the degree of similarity (col. 18 lines 55 to col. 19 lines 7, col. 1 lines 7-67, Abstract).

As to claim 10, the second calculating controller is operable (col. 5 lines 32-67) to select the key images most similar to the database image (col. 27 lines 20-67) from the key images and to calculate the degree of similarity (col. 18 lines 55 to col. 19 lines 7, Abstract).

As to claim 12, the extracting step includes the sub-steps of extracting a plurality of types of the feature quantities from the respective key images specified by the specifying controller (col. 5 lines 32-67);

comparing by means of a selecting means the feature quantities, extracted by the extracting sub-step, among the plural key images specified by the specifying controller to thereby select at least one of the types of the feature quantities (col. 1 lines 7 col. 2 lines 53, Abstract); and determining the common feature quantities based on the at least one type of the features quantities selected by the selecting means (col. 18 lines 55 to col. 19 lines 7).

As to claim 13, the selecting means is operable (col. 5 lines 32-67) to compare the feature quantities of the same types among the plural key images specified by the specifying controller and wherein the determining means is operable to calculate an average value of the feature quantities of the plural key image with respect to the types of the feature quantities selected by the selecting means, to thereby determine the calculated average value as representing the common feature quantities (col. 1 lines 7 to col. 2 lines 43, Abstract);

As to claim 15, "step of specifying includes,..." at col. 2 lines 13-64.

As to claim 16, "the calculating controller,... " at Abastract and

"the selecting controller,..." at col. 2 lines 13-64.

As to claim 18, the third calculating controller is operable to increase a weight of the degree of similarity (col. 18 lines 55 to col. 19 lines 7), calculated by the first calculating controller, to a value greater than that of the degree of similarity, calculated by the second calculating controller, to thereby calculate the final degree of similarity (col. 5 lines 32-67, col. 1 lines 7-67).

As to claim 19, the first calculating controller is operable to extract the common feature (Abstract) quantities of the image common to all of the key images, and to compare those common feature quantities with the database image to thereby calculate the degree of similarity (col. 18 lines 55 to col. 19 lines 7, col. 5 lines 32-67).

As to claim 20, the second calculating controller is operable (col. 5 lines 32-67) to select the key images most similar to the database image from the key images and to calculate the degree of similarity (col. 1 lines 7 to col. 2 lines 53, col. 27 lines 20-55).

As to claim 22, the extracting controller includes an extracting means for extracting a plurality of types of the feature quantities from the respective key images specified by the specifying controller (col. 5

lines 32-67); a selecting means for comparing the feature quantities, extracted by the extracting sub-step,

among the plural key images specified by the specifying controller to thereby select at least one of the

types of the feature quantities (col. 1 lines 7-67 , Abstract); and

a determining means for determining the common feature quantities based on the at least one

type of the features quantities selected by the selecting means (col. 18 lines 55 to col. 19 lines 7,

Abstract).

As to claim 23, the selecting means is operable to compare the feature quantities of the same

types among the plural key images specified by the specifying controller and wherein the determining

means is operable to calculate (col. 5 lines 32-67) an average value of the feature quantities of the plural

key image with respect to the types of the feature quantities selected by the selecting means, to thereby

determine the calculated average value as representing the common feature quantities (col. 18 lines 55 to

col. 19 lines 7, Abstract)

As to claim 25, "instruction for retrieving,..." at col. 2 lines 13-64.

As to claim 26, "comparing includes,... " at Abastract and

"retrieving include,..." at col. 2 lines 13-64.

As to claim 28, the third calculating controller is operable to increase a weight of the degree of

similarity, calculated by the first calculating controller, to a value greater than that of the degree of

similarity, calculated by the second calculating controller, to thereby calculate the final degree of similarity

(col. 18 lines 55-67, Abstract, col. 1 lines 7-67).

As to claim 29, the first calculating controller is operable to extract the common feature quantities

of the image common to all of the key images, and to compare those common feature quantities with the

database image to thereby calculate the degree of similarity (col. 18 lines 55 to col. 19 lines 7, col. 1 lines

7 to col. 2 lines 43).

As to claim 30, the second calculating controller (col. 5 lines 32-67) is operable to select the key

images most similar to the database image from the key images and to calculate the degree of similarity

(col. 18 lines 55 to col. 19 lines 7, col. 1 lines 7 to col. 2 lines 43).

4.   In response to the applicant's Amendments "being specified by a user". In Sato, a user writes an

image (designated image 100) to be retrieved. Reference numeral 202 denotes a condition input window

on which the user designates, e.g., the type of the target image. Reference numeral 203 denotes a

retrieval result display window for displaying images as retrieval results in the order of, e.g., similarity

values. Reference numeral 204 denotes a color palette, which is used by the user to select color

information to be assigned to the designated image. Reference numeral 205 denotes an additional

information display window for displaying additional information added to images as the retrieval results.

In the above-mentioned arrangement, the user designates and inputs, e.g., the type of image

data to be retrieved in the condition input window 202, inputs a figure which roughly depicts a partial

image present in the image data to be retrieved in the figure input window 201, and designates the color

of the figure using the color palette 204 (col. 7 lines 21-39).

Allowable Subject Matter

5.   Claim 33 is objected to as being dependent upon a rejected base claim, but would be allowable if

rewritten in independent from including all of the limitations of the base claim and any intervening claims.

Conclusion

6.   Any inquiry concerning this communication or earlier communications from the examiner should

be directed to Mohammad Ali whose telephone number is (703) 605-4356. The examiner can normally

be reached on Monday to Thursday from 7:30am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John

Breene can be reached on (703) 305-9790. The fax phone numbers for the organization where this

application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238

for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be

directed to the receptionist whose telephone number is (703) 305-9600.

Mohammad Ali

Patent Examiner

JEAN R. HOMERE
PRIMARY EXAMINER

October 7, 2002